OTAY BUSINESS PARK

ON-SITE RESOURCE MANAGEMENT PLAN
TM 5505

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Prepared for the County of San Diego

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Otay Business Park
On-site Resource Management Plan

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LIST OF ACRONYMS

BFSA	Brian F. Smith and Associates
BOS	Biological Open Space
Cal-IPC	California Invasive Plant Council
CDFG	California Department of Fish and Game
CNDDB	California Natural Diversity Database
Corps	U.S. Army Corps of Engineers
County	County of San Diego
DPLU	Director of Planning and Land Use
DPR	Director of Parks and Recreation
DPW	Director of Public Works
EOMSP	East Otay Mesa Specific Plan
HELIX	HELIX Environmental Planning, Inc.
HOA	Homeowners Association
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NAHC	Native American Heritage Commission
OHV	off-highway vehicles
PAMA	Pre-Approved Mitigation Area
PAR	Property Analysis Record
RMP	Resource Management Plan
RWQCB	Regional Water Quality Control Board
TM	Tentative Map
USFWS	U.S Fish and Wildlife Service

1.0 INTRODUCTION

This Resource Management Plan (RMP) has been prepared for the 8.90-acre Otay Business Park On-Site Biological Open Space (BOS) preserve in accordance with mitigation requirements identified in the project's biological technical report (HELIX Environmental Planning, Inc. [HELIX] 2010a). This RMP provides direction for the permanent preservation and management of the BOS preserve in accordance with County of San Diego (County) regulations.

1.1 PURPOSE OF RESOURCE MANAGEMENT PLAN

The purpose of this RMP is to provide guidance in which to ensure preservation and long-term management of the BOS. This RMP:

1. Guides management of vegetation communities and habitats, plant and animal species, cultural resources, and programs described herein to protect and, where appropriate, enhance biological and cultural resources;
2. Serves as a descriptive inventory of vegetation communities and plant and animal species that occur within the BOS;
3. Serves as a descriptive inventory of archaeological and/or historical resources that occur within the BOS;
4. Establishes the baseline conditions from which adaptive management will be determined and success will be measured; and
5. Provides an overview of the operation, maintenance, administrative, and personnel requirements to implement management goals, and serves as a budget planning aid.

The details of this conceptual plan may be modified when the Final RMP is prepared and submitted to the County for approval. The County will review the Final RMP to ensure that it meets the specified Purpose and Objectives.

The Otay Business Park project site is a Tentative Map (TM) 5505 for land designated for Mixed Industrial use in Subarea 2 of the East Otay Mesa Specific Plan (EOMSP). The TM would subdivide the 161.6-acre property into 59 industrial lots, 2 detention basin lots (Detention Basins A and B), a 1-acre lot set aside for a sewer pump station, and approximately 8.90 acres provided as realigned drainage channel and on-site open space. A 40-foot Limited Building Zone occurs on the western and northeastern portions of the BOS (Figure 3).

Project development would impact 175.31 acres including impacts to 0.24 acre of vernal/road pool, 0.01 acre of freshwater marsh, 0.19 acre of saltgrass grassland, 163.41 acres of non-native grassland, 10.19 acres of disturbed habitat, and 1.27 acres of developed land.

All the sensitive plants recorded on the project site would be impacted by the development, including small-flowered morning-glory (*Convolvulus simulans*; 5 individuals), variegated dudleya (*Dudleya variegata*; approximately 3,465 individuals), San Diego button-celery (*Eryngium aristulatum* var. *parishii*; 3 individuals), San Diego barrel cactus (*Ferocactus viridescens*; 31 individuals), chocolate lily (*Fritillaria biflora;* 4 individuals), San Diego marsh-elder (*Iva*

hayesiana; 11 individuals), spreading navarretia (*Navarretia fossalis*; 3 individuals), and one location supporting ashy spike-moss (*Selaginella cinerascens*).

The project applicant proposes to impact all of the sensitive animal species recorded on the project site, including San Diego fairy shrimp (*Branchinecta sandiegonensis*), Riverside fairy shrimp (*Streptocephalus woottoni*), Quino checkerspot butterfly (*Euphydryas editha quino*; 1 individual observed in 2005), western spadefoot (*Spea hammondii*; 1 individual on site and 1 off site), grasshopper sparrow (*Ammodramus savannarum*; 1 individual), golden eagle (*Aquila chrysaetos*; foraging habitat), burrowing owl (*Athene cunicularia*; 7 pairs and 163.60 acres of occupied habitat), northern harrier (*Circus cyaneus*; 1 individual), white-tailed kite (*Elanus leucurus*; 1 individual), California horned lark (*Eremophila alpestris*; 1 individual on site and 1 off site), and loggerhead shrike (*Lanius ludovicianus;* 1 individual).

Preservation of 8.90 acres on site are covered under this RMP. In addition, preservation of 68.72 acres will occur within the Lonestar Parcels (HELIX 2010b) and 81.73 acres will occur off of Otay Mesa (RMP to be prepared).

1.1.1 Conditions and/or Mitigation Measures that Require an RMP

This RMP satisfies County requirements for public review of the project pursuant to the California Environmental Quality Act and conditions that will be part of the Resolution of Approval. This RMP is also being submitted to the U.S. Army Corps of Engineers (Corps) and Regional Water Quality Control Board (RWQCB) as part of the permit application package. Project conditions requiring an RMP include mitigation for impacts to drainages, non-native grasslands, sensitive plants (small-flowered morning-glory, variegated dudleya, San Diego button-celery, San Diego barrel cactus, chocolate lily, San Diego marsh-elder, and spreading navarretia), and sensitive animals (San Diego fairy shrimp, Riverside fairy shrimp, Quino checkerspot butterfly, western spadefoot, grasshopper sparrow, golden eagle, burrowing owl, northern harrier, white-tailed kite, California horned lark, and loggerhead shrike).

1.1.2 Agency Review and Coordination

A copy of the final RMP will be submitted to the U.S Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) for approval.

2.0 IMPLEMENTATION

2.1 RESOURCE MANAGER QUALIFICATIONS AND RESPONSIBLE PARTIES

Proposed Resource Manager:

The resource manager shall be one of the following:

- Conservancy group
- Natural resources land manager
- Natural resources consultant

- County Department of Parks and Recreation
- County Department of Public Works
- Federal or State Wildlife Agency (USFWS, CDFG)
- Federal Land Manager such as Bureau of Land Management
- City Land Managers, including but not limited to Department of Parks and Recreation, Watershed Management or Department of Public Works.

The resource manager shall be approved in writing by the Director of Planning and Land Use (DPLU), the Director of Public Works (DPW), or the Director of Parks and Recreation (DPR). Any change in the designated resource manager shall also be approved in writing by the approving director. Appropriate qualifications for resource managers include, but are not limited to:

- Ability to carry out habitat monitoring or mitigation activities;
- Fiscal stability, including preparation of an operational budget (using an appropriate analysis technique) for the management of this RMP;
- Have at least 1 staff member with a biological, ecological, or wildlife management degree from an accredited college or university, or have a Memorandum of Understanding (MOU) with a qualified person with such a degree;
- If cultural sites are present, have a cultural resource professional on staff or a MOU with cultural consultant; and
- Experience with habitat and cultural resource management in southern California.

Proposed Land Owner:

Fee title of all BOS may be held by the Homeowners Association (HOA), or transferred to the Resource Manager or other appropriate landowner (e.g., land trust, conservancy, or public agency).

The 8.90-acre BOS conservation easement must be recorded prior to initiation of project impacts. This BOS is adjacent to the proposed open space for the Otay Crossings Commerce Park site to the east (Figure 3). The realigned drainage channel would be vegetated with grasses. San Diego marsh-elder translocation also would occur in the realigned drainage channel (Figure 3; HELIX 2010c).

Proposed Easement Holder:

If the land is transferred in fee title to any non-governmental entity, a Biological Open Space Easement or Conservation Easement dedication must be recorded. This easement should include the County but may also include other appropriate responsible agencies as defined under Section 815 of the California Civil Code as a grantee or third-party beneficiary. If the land is transferred to the County or other public conservation entity, no easement dedication is necessary.

Restoration Entity:

If revegetation/restoration activities are required, management responsibility for the revegetation/ restoration area shall remain with the restoration entity until restoration/revegetation is completed. Upon County/Agency acceptance of the revegetated/restored area, management responsibility for the revegetation/restoration area will be transferred to the resource manager.

2.2 FINANCIAL RESPONSIBILITY/MECHANISM

Acceptable financial mechanisms include the following:

- Special District. Formation of a Lighting and Landscape District or Zone, or Community Facility District as determined appropriate by the Director of DPLU, DPW or DPR. If the developer desires DPR to manage the land, the following criteria must be met:
  a. The land must be located inside a Pre-Approved Mitigation Area (PAMA) or proposed PAMA, or otherwise deemed acceptable by DPR.
  b. The land must allow for public access.
  c. The land must allow for passive recreational opportunities such as a trails system.

- Endowment. A one-time non-wasting endowment, which is tied to the property, to be used by the resource manager to implement the RMP.

- Other acceptable types of mechanisms including annual fees, to be approved by the Director of DPLU, DPW or DPR.

- Transfer of ownership to existing entity (e.g. Borrego Foundation, Cleveland National Forest).

The project applicant is responsible for all RMP funding requirements, including direct funds to support the RMP start-up tasks as well as an on-going funding source for annual tasks, which is tied to the property to fund long-term RMP implementation. It is currently anticipated that long-term management funding will be provided through an endowment by the project applicant. Start-up tasks include fence and sign installation around the on-site BOS, and data base compilation. Long-term tasks involve the management and maintenance of the BOS in perpetuity, including habitat monitoring and mapping, exotic species control, and general monitoring and reporting. These habitat management tasks commence immediately upon initiation of long-term management by the Resource Manager.

2.3 CONCEPTUAL COST ESTIMATE

A Property Analysis Record (PAR) and cost estimate will be prepared for the on-site 8.90-acre BOS when a Resource Manager has been identified. Table 1 provides an estimate of time required for tasks.

Table 1

RESOURCE MANAGEMENT TASKS			
Check if applies	**Tasks**	**Frequency (times per year)**	**Hours required per year***
BIOLOGICAL TASKS			
X	Baseline inventory of resources (if original inventory is over 5 years old)*	One time	8
X	Update biological mapping*	Once every 5 years	1
X	Update aerial photography	Once every 5 years	1
X	Removal of invasive species*	As needed; anticipated twice per year	40
X	Predator control	As needed	8
N/A	Habitat Restoration / Installation	--	--
N/A	Habitat Restoration / Monitoring and Management	--	--
X	Poaching control	--	4
Species Surveys (include a separate line for each species)			
X	Sensitive Plant Species Monitoring	1 out of every 5 years	2
X	QCB Surveys	2 out of every 5 years	3
X	Fairy Shrimp Surveys	2 out of every 5 years	3
X	Burrowing Owl Surveys	Every year	4
Species management (include a separate line for each specific task)			
X	Sensitive Plant Species	As needed	4
X	QCB	As needed	4
X	Fairy Shrimp	As needed	4
X	Burrowing Owl	As needed	4
N/A	Noise management, if required	--	--
X	For lands within the MSCP and outside PAMA, consult Table 3-5 of the MSCP Plan for required biological resource monitoring	As needed	4
N/A	Other		--
CULTURAL RESOURCES TASKS			
N/A	Monitoring	--	--
N/A	Stewardship	--	--
OPERATIONS, MAINTENANCE AND ADMINISTRATION TASKS			
X	Establish and maintain database and analysis of data	Annually	8
X	Write and submit annual report to County*	Annually	8
X	Review fees for County review of annual report*	Annually	4

Table 1 (cont.)

RESOURCE MANAGEMENT TASKS			
Check if applies	**Tasks**	**Frequency (times per year)**	**Hours required per year***
OPERATIONS, MAINTENANCE AND ADMINISTRATION TASKS (cont.)			
X	Review and if necessary, update management plan*	Every 5 years	5
X	Construct permanent signs	One time	16
X	Replace signs	As needed	8
X	Construct permanent fencing/gates	One time	40
X	Maintain permanent fencing/gates	As needed	8
X	Remove trash and debris*	Quarterly	20
X	Coordinate with DEH and Sheriff	As needed	4
X	Maintain access road	As needed	4
N/A	Install stormwater BMPs	--	--
X	Maintain stormwater BMPs	As needed	20
N/A	Restore Built Structure	One time	--
N/A	Maintain Built Structure	As needed	--
N/A	Maintain regular office hours	--	--
N/A	Inspect and service heavy equipment and vehicles	As needed	--
N/A	Inspect and repair buildings, residences and structures	--	--
N/A	Inspect and maintain fuel tanks	--	--
N/A	Coordinate with utility providers and easement holders	--	--
X	Manage hydrology (as required)	As needed	20
X	Coordinate with law enforcement and emergency services (e.g., fire)	As needed	4
X	Coordinate with adjacent land managers	As needed	4
X	Remove graffiti and repair vandalism	Quarterly	16
	Other		--
PUBLIC USE TASKS			
N/A	Construct trail(s)	N/A	--
N/A	Monitor, maintain/repair trails	N/A	--
N/A	Control public access	N/A	--
N/A	Provide Ranger patrol	N/A	--
N/A	Provide visitor/interpretive services	N/A	--
N/A	Manage fishing and/or hunting program	N/A	--

Table 1 (cont.)

RESOURCE MANAGEMENT TASKS			
Check if applies	**Tasks**	**Frequency (times per year)**	**Hours required per year***
PUBLIC USE TASKS (cont.)			
N/A	Provide Neighbor Education - Community Partnership	N/A	--
N/A	Prepare and reproduce trail maps and interpretative materials.	N/A	--
N/A	If HOA or similar is funding management, provide annual presentation to HOA	N/A	--
N/A	Coordinate volunteer services	N/A	--
N/A	Provide emergency services access/ response planning	N/A	--
N/A	Other	N/A	--
FIRE MANAGEMENT TASKS			
X	Coordinate with applicable fire agencies and access (gate keys, etc.) for these agencies	As needed	8
N/A	Plan fire evacuation for public use areas	--	--
N/A	Protect areas with high biological importance	--	--
N/A	Hand-clear vegetation	--	--
N/A	Mow vegetation	--	--
POST-FIRE TASKS			
N/A	Control post-fire erosion	--	--
N/A	Remove post-fire sediment	--	--
N/A	Reseed after fire	--	--
N/A	Replant after fire	--	--
	TOTAL	**--**	**251**

*Hours and costs to be determined by Resource Manager and depicted in the PAR and the Final RMP

2.4 REPORTING REQUIREMENTS

An RMP Annual Report will be submitted to the County and Corps, along with the submittal fee to cover County staff review time. Annual reports shall discuss the previous year's management and monitoring as well as management/monitoring anticipated for the upcoming year. The Annual Report shall provide a concise but complete summary of management and monitoring methods, identify any new management issues, and address the success or failure of management approaches (based on monitoring). The report shall include a summary of changes from baseline or previous year conditions for species and habitats, and address any monitoring and management limitations, including weather (e.g., drought). The report shall also address any management (changes) resulting from previous monitoring results and provide methods for measuring the success of adaptive management. For new sensitive species observations or

significant changes to previously reported species, the annual report shall include copies of completed California Natural Diversity Database (CNDDB) forms with evidence that they have been submitted to the State. The report shall also include copies of invasive plant species forms submitted to the State or County.

A fee will be collected by DPLU upon submittal of the Annual Report for staff's review time. The RMP may also be subject to an ongoing deposit account for staff to address management challenges as they arise. Deposit accounts, if applicable, are replenished to a defined level as necessary.

2.5 MEMORANDUM OF AGREEMENT (MOA)

For RMPs associated with discretionary projects, the County will require a Memorandum of Agreement (MOA) with the applicant. The agreement will be executed when the County accepts the final RMP. The MOA will state that the applicant agrees to implement the RMP and provide perpetual funding. The MOA shall also provide a mechanism for the funds to transfer to the County in the event of the failure of the resource manager to meet the goals of the RMP. The MOA will specify that RMP funding or funding mechanism be established prior to the following milestones:

- For subdivisions, prior to the approval of grading or improvement plans, or prior to approval of the Parcel/Final Map, whichever is first;
- For permits, prior to construction or use of the property in reliance on the permit.

3.0 PROPERTY DESCRIPTION

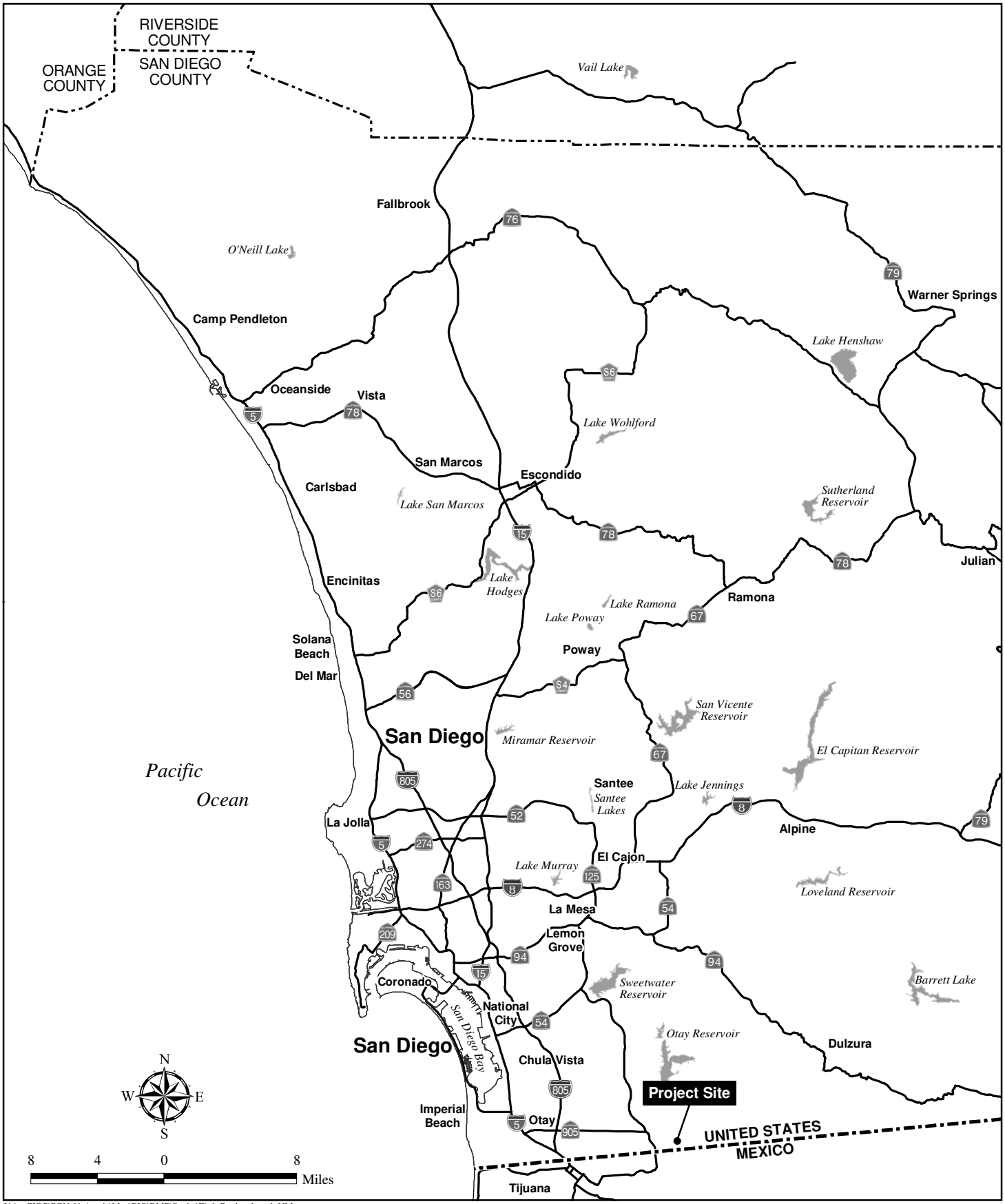
3.1 LEGAL AND GEOGRAPHICAL DESCRIPTION

The Otay Business Park BOS is located in the southeastern portion of Otay Mesa within San Diego County (Figure 1). The BOS lies immediately north of the U.S./Mexico border approximately 0.5 mile east of Enrico Fermi Drive. It occupies the southeastern quadrant of Section 31 within Township 18 South, Range 1 East of the U.S. Geological Survey 7.5-minute Otay Mesa quadrangle (Figure 2). The BOS consists of a portion of Assessor's Parcel Number 648-070-21 (Figure 2). Refer to Biological Resources Report prepared by HELIX Environmental Planning, Inc. (HELIX 2010a).

The on-site BOS consists of 1 area occurring along the southeastern edge of the site at the base of the foothills of the San Ysidro Mountains and adjacent to the U.S./Mexico border (Figure 3). Elevations within the BOS range between 482 and 512 feet above mean sea level.

3.2 ENVIRONMENTAL SETTING

Dirt roads cross the BOS, carved out of the non-native grassland by off-highway vehicles (OHV) and Border Patrol vehicles (Figure 3). Upon development of the areas not targeted for conservation on site, the applicant will ensure that the Habitat Manager has access to perform management obligations.



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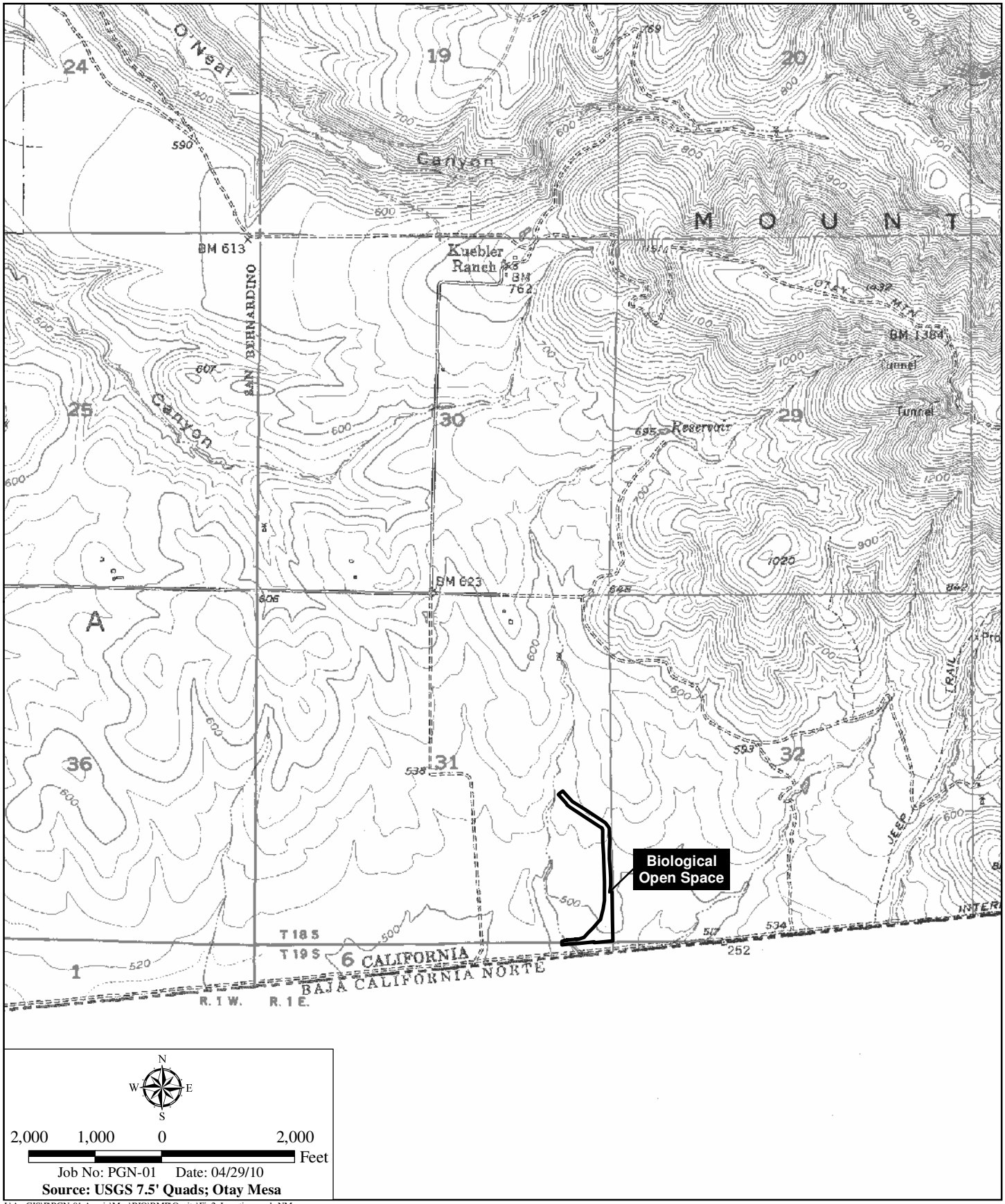
Regional Location Map

ON-SITE RESOURCE MANAGEMENT PLAN FOR OTAY BUSINESS PARK

HELIX

Figure 1



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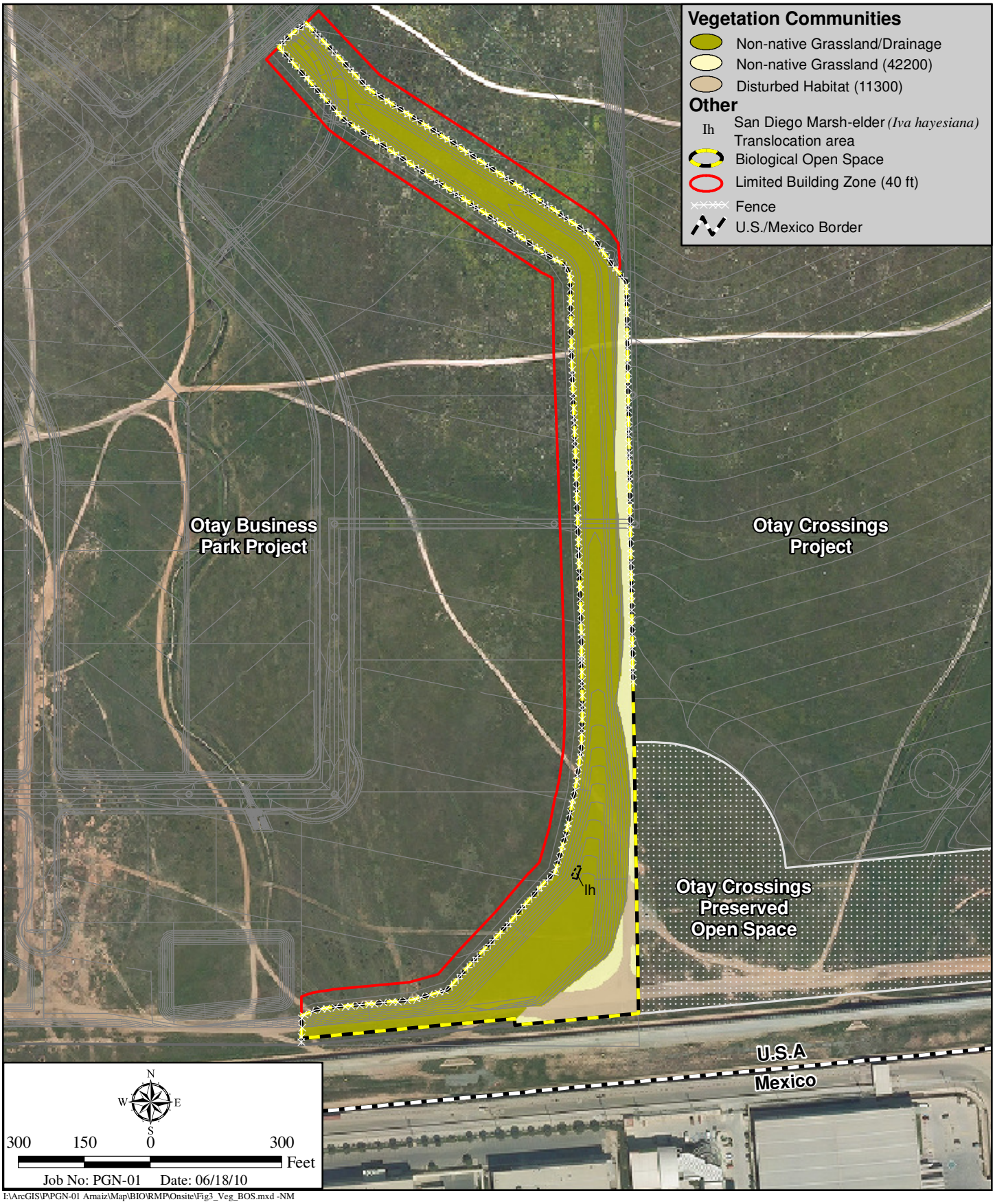
Project Location Map

ON-SITE RESOURCE MANAGEMENT PLAN FOR OTAY BUSINESS PARK

HELIX

Figure 2



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Vegetation Within Biological Open Space

ON-SITE RESOURCE MANAGEMENT PLAN FOR OTAY BUSINESS PARK

HELIX

Figure 3

The BOS is located within the South County Segment of the County's Multiple Species Conservation Program (MSCP) Subarea Plan and contains land designated in the MSCP as Minor Amendment Areas Subject to Special Consideration.

The BOS is located in the Peninsular Range Geomorphic Province of southern California. Soils mapped within the BOS consist of Huerhuero loam (Bowman 1973). Huerhuero loams are moderately well drained loams with a clay subsoil. The Huerhuero loam association is made up of soils that developed in sandy marine sediments.

The climate in San Diego County is generally mild and arid. Temperatures in Otay Mesa are generally highest in September (mean high temperatures are 79˚F) and lowest in December (mean low temperatures are 45˚F). Average annual precipitation in the Otay Mesa is approximately 9.9 inches, with the highest average rainfall totals occurring in January and February (1.99 inches) and March (2.07 inches). The driest months are June, July, and August with approximately 0.08, 0.03, and 0.08 inch of rainfall per month, respectively (Weather.com 2008).

The BOS is located within the Water Tanks Hydrologic Subarea and Tijuana Valley Hydrologic Area of the Tijuana Hydrologic Unit within the Tijuana River watershed. Nearly three-quarters of the Tijuana River watershed is within Mexico. A single drainage occurs within the BOS; it is a narrow, mostly unvegetated feature that traverses through the southern BOS area and enters a culvert into Mexico at the Border Fence.

The rate of fires in San Diego County coastal shrublands generally increased over the last half of the 20th century. Over 600 fires have occurred in the foothills and mountains of San Diego County between 1910 and 1999, and several major fires in excess of 50,000 acres have occurred in recent years, likely as a result of drought conditions. The BOS did not burn in the 2003 or 2007 fires, or in recent preceding years.

3.3 USES OF PLAN AREA

The BOS would be used as mitigation for the project and consist of a realigned drainage channel to maintain flow across the mesa, fuel modification in the northern portion for adjacent development, burrowing owl mitigation (consisting of non-native grassland), and translocation for San Diego marsh-elder. No trails are proposed within the BOS.

A 25-foot wide San Diego Gas & Electric utility easement crosses the southeastern-most tip of the BOS parallel to the U.S./Mexico border.

The project includes a 40 foot wide fuel modification zone within the BOS (Figure 3). The fuel modification zone is intended to allow for necessary fuel modification for the adjacent development and also ensure that no activities occur within the portion of the BOS designated as habitat mitigation for project impacts to burrowing owls and non-native grassland. The fuel modification zone occurs entirely on the developed pads where they abut the habitat mitigation area. The fuel modification within the channel would be limited to twice annual mowing of grasses.

4.0 BIOLOGICAL RESOURCES – FUNCTIONS AND VALUES

4.1 VEGETATION COMMUNITIES

The post-development (Otay Business Park project) condition of the BOS will include 2 vegetation communities (non-native grassland and disturbed habitat) and a realigned drainage channel within the BOS (Table 2; Figure 3). Refer to the Biological Resources Report prepared by HELIX (2010a) for more information.

Table 2
VEGETATION COMMUNITIES WITHIN THE BOS

Vegetation Community/Habitat*	Acre(s)
Non-native grassland/Drainage channel (no numeric code)	7.44
Non-native grassland (42220)	0.93
Disturbed habitat (11300)	0.53
TOTAL	**8.90**

*Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008)

4.1.1 Drainage

The realigned drainage channel would be vegetated with grasses and translocated San Diego marsh-elder.

4.1.2 Non-native Grassland

Non-native grassland consists of introduced grasses, often associated with native forbs. Introduction of exotic grasses in California due to grazing and agricultural practices, coupled with severe droughts, has contributed to the conversion of native grassland communities to non-native grassland (Jackson 1985). Whereas native grasslands supported mostly perennials such as needlegrass (*Nasella* sp.), non-native grasslands within the BOS support mostly annuals.

4.1.3 Disturbed Habitat

Disturbed habitat consists of land that has been cleared of vegetation or where the soil has been compacted, greatly reducing its habitat value. Within the BOS, the disturbed habitat consists of areas of exposed, packed dirt.

4.2 PLANT SPECIES

4.2.1 Plant Species Correlation with Habitat Within the BOS

A total of 82 plant species were recorded on the project site, most of which were observed in non-native grassland. Approximately 68 of these species may occur within the BOS (Appendix A).

4.2.2 Rare, Threatened, or Endangered Plant Species Present or Likely to Occur

No sensitive plant species were observed within the BOS during surveys. A list of sensitive plant species with potential to occur within the BOS is provided in Appendix B.

4.2.3 Non-native and/or Invasive Plant Species

Several non-native grasses and forbs occur within the BOS and are identified in Appendix A. The species posing the greatest management issue are mustard and fennel (*Foeniculum vulgare*).

4.3 WILDLIFE SPECIES

4.3.1 Wildlife Species Correlation with Habitat Within the BOS

A total of 33 animal species were recorded on the project site, including 11 invertebrates, 2 amphibians, 2 reptiles, 15 birds, and 3 mammals. Approximately 22 of these species may occur within the BOS (Appendix C).

4.3.2 Rare, Threatened, or Endangered Wildlife

One (1) sensitive animal species (loggerhead shrike [***Lanius ludovicianus***]) was observed within the BOS prior to development. This species is discussed below. Sensitive animal species that were not detected but have potential to occur on site are listed in Appendix D. Explanations of status and sensitivity codes for both plant and animal species are included in Appendix E.

Loggerhead shrike (*Lanius ludovicianus*)
Status: BCC/SSC; County Group 1
Distribution: Widespread but declining throughout North America; winters in Central America
Habitat: Open habitats including grasslands, shrublands, and ruderal areas with adequate perching locations
Status on site: A single individual was detected within disturbed habitat in the southeastern portion of the site. Suitable habitat occurs throughout the 161.6-acre project site and is abundant off site in the project vicinity.
MSCP Management Requirements: Area specific management directives have not been established for this species

4.3.3 Non-native and/or Invasive Wildlife

No non-native animal species were observed within the BOS and none are expected since the surrounding projects are industrial rather than residential. As such, non-native animal species do not pose a significant management risk for the BOS.

4.4 OVERALL BIOLOGICAL AND CONSERVATION VALUE

As previously stated, the realigned drainage channel would be vegetated with grasses and translocated San Diego marsh-elder. The BOS has been configured to maintain an open space connection with open space on the Otay Crossings Commerce Park project to the east.

4.5 ENHANCEMENT AND RESTORATION OPPORTUNITIES

As stated above, approximately 8.90 acres of land will be dedicated as open space. Of this, approximately 7.44 acres will be constructed as a realigned drainage channel and revegetated with grasses and translocated San Diego marsh-elder. The Resource Manager is not responsible for carrying out the channel realignment or translocation efforts. A restoration specialist will be responsible for overall supervision of the installation, maintenance, and monitoring of the restoration areas for the 5 years.

4.6 CULTURAL RESOURCES DESCRIPTION

4.6.1 Archaeological Resources

As identified in the EOMSP Cultural Resources Technical Report (Ogden Environmental and Gallegos and Associates 1993) and in a 2002 County Supplement, the project site was originally included in an archaeological survey of a larger study area for a former sludge processing facility proposed on site. The County Supplement is a compilation of the numerous cultural resource studies conducted on parcels within the East Otay Mesa area since the 1994 adoption of the EOMSP, and provides identification of new and updates to previously identified cultural resources, thus updating the cultural resources information for the entire Specific Plan area. Portions of the property have also been surveyed for other projects, including a cultural resources survey conducted for the proposed SR 11 and East Otay Mesa Port Of Entry (Kyle and Van Wormer 2001). An additional cultural resources study was conducted for the project site by Brian F. Smith and Associates (BFSA; 2009).

The results of BFSA's study identified 23 archaeological sites totally or partially within the project area and off-site improvement area. Only 1 lithic site occurs within the BOS: SDI-8079. The site classified as a habitation site with lithic scatters (Table 3). This site was previously tested and found to be not significant. Although this site is not considered significant, consultation with a cultural resource professional would be initiated prior to any earthwork on site.

Table 3
CULTURAL RESOURCES WITHIN THE BOS

Site Number	Site Description	Previously Tested?	Comments	Significant?
CA-SDI-8079	Habitation site with lithic scatter	Yes	Tested (not significant according to Russell et al. 2002)	No

4.6.2 Native American Consultation

No evidence of human remains, including those interred outside of formal cemeteries, was discovered during the records search, literature review, or testing program. BFSA requested a review of the Sacred Lands File from the Native American Heritage Commission (NAHC) in Sacramento, California. The NAHC indicated that no known cultural resources are present within the project area. In accordance with San Diego County guidelines, additional Native American consultation was conducted during the project with a representative of the Kumeyaay Nation. There is no indication that the project site was used by Native Americans for religious, ritual, or other special activities and, therefore, impacts to Native American burial sites are not expected.

4.6.3 Historical Resources

The results of BFSA's study identified 2 historic (structures) sites totally or partially within the project area and off-site improvement area, neither of which occur within the BOS.

5.0 BIOLOGICAL ELEMENT GOALS

The ultimate goal of this RMP is to detail the methods to preserve and manage lands to the benefit of the flora, fauna, and native ecosystem functions reflected in the natural communities occurring within the RMP land. In addition, this RMP establishes the following goals with regard to biological resources:

Vegetation Communities: To preserve 8.90 acres of habitat within the BOS in perpetuity. Within the BOS, habitat will be monitored for quality. In addition, exotic plant control measures will be implemented to prevent or reduce the spread of weeds, OHV activity will be prevented, and adaptive management will be conducted if necessary following fire or flood events.

Sensitive Species: To ensure the continued existence of all sensitive plant and animal species and/or to facilitate expansion of sensitive plant and animal species within the BOS.

5.1 BIOLOGICAL MANAGEMENT TASKS

The BOS will be visually inspected for changes during quarterly maintenance and monitoring visits, and all observations will be documented. Any substantial changes will be monitored more closely to determine the necessity of additional measures. Such visits shall include the monitoring of the spread of exotic plant species and accumulation of trash/debris. Fences and signs associated with the BOS also will be inspected and any necessary repairs noted.

Baseline Biological Inventory

The quantity and quality of vegetation communities within the BOS will be documented during the first year of active management. This inventory will incorporate data from the project's biological technical report (HELIX 2010a) with the findings of an initial baseline inventory field survey. These data will allow the Resource Manager to measure habitat changes caused by natural and human effects and to evaluate management efforts during subsequent years.
Upon implementation of this RMP, the Resource Manager will be provided digital files

containing the existing vegetation and sensitive resources data, which will be updated following the baseline inventory field survey during the start-up (first year) phase of the RMP. The intent of this update is to document current conditions in the open space areas (including graphic and tabular depictions of habitat acreages), document all species observed (either directly or indirectly by sign such as scat, tracks, etc.) within each identified habitat type, and document the locations of any sensitive plant and animal species.

The baseline inventory update will be conducted during the first year of active management. To optimize the probability of detecting sensitive species reported or expected to occur within the BOS, this survey should be conducted between March and May, when the majority of sensitive plant and animal species are most detectable.

Update Biological Mapping

Vegetation and sensitive species mapping will be updated every 5 years following implementation of this RMP. A site visit should be conducted using updated aerial photography to determine vegetation communities present at the time of the survey. Any observed/detected sensitive species will be added to the biological resources maps of the BOS.

Sensitive Species Monitoring

Preservation of sensitive plant and animal populations within the BOS is one step in achieving the overall long-term conservation of these species. Monitoring of sensitive species is another step in achieving the overall long-term conservation of these species. Sensitive species monitoring will help the Resource Manager identify long- and short-term threats and recommend any necessary protective measures. Sensitive plant and animal monitoring will occur during quarterly management activities, and the locations of any observed/detected sensitive species will be documented and added to the biological resources maps. Adaptive management measures may be required to intervene when either natural or man-made disturbances or effects appear to be adversely influencing a sensitive species.

It is the responsibility of the Resource Manager to evaluate the status of preserved species within the preserve and to institute protective measures if any individual species becomes threatened. Sensitive species population monitoring will vary based on the target species. In each assessment, the Resource Manager will observe and document sensitive species locations and conditions. Monitoring/reporting efforts will include all sensitive species previously documented within the BOS.

Rare Plant Surveys

A rare plant survey will be conducted 1 of every 5 years throughout the BOS during the appropriate survey period for sensitive plant species translocated within the BOS (Table 4) and other species that were observed within non-native grassland within the project area prior to development. Specific attention would be given to any factors that may be negatively affecting these species (i.e., vandalism, mortality, etc.). The Habitat Biologist will decide in which years the survey will be conducted, with the goal of surveying during an average or above-average

rainfall year. In addition, an annual visual assessment of sensitive species will be conducted during a regular maintenance event and will be compared to results from previous years in order to help track overall population trends. Sensitive plant species observed incidentally during maintenance events or other site visits would also be documented.

Table 4
BLOOMING PERIODS/SURVEY SEASON
FOR SENSITIVE PLANT SPECIES WITHIN THE BOS

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Variegated dudleya*				X	X	X						
San Diego barrel cactus*	Survey season is year round, blooms not necessary											
San Diego marsh-elder*				X	X	X	X	X	X	X		
Small-flowered morning-glory*			X	X	X	X	X					
Chocolate lily**		X	X	X	X	X						

*Blooming periods are from CNPS 2009.
**Blooming period is from Munz 1974.

A 1-day survey for Quino checkerspot butterfly will be conducted 2 out of every 5 years within appropriate habitat in the BOS. Each survey will occur during the peak of the flight season (as determined through coordination with the USFWS) and will concentrate on areas supporting QCB host plants and nectaring resources (if any). The Habitat Biologist will decide in which years the surveys will be conducted, with the goal of surveying during average or above-average rainfall years. The surveys will only be conducted during protocol-level temperature, cloud-cover, and wind conditions. Any QCB observed incidentally during other surveys will also be documented.

Burrowing Owl Surveys

A 1-day assessment/survey for burrowing owl will be conducted every year during the owl breeding season (February 1 through August 31) within appropriate habitat in the BOS. If possible, the survey should be conducted during the peak of the breeding season (April 15 through July 15). This survey will document all burrowing owl sightings, occupied burrows, young of the year, and burrows with owl sign observed on site, as well as presence/absence of ground squirrels. The surveys may be conducted concurrently with surveys for other sensitive species.

Exotic Plant Control

The Resource Manager will coordinate with land developers and owners adjacent to the BOS to provide information regarding exotic plant species and to increase the efficiency of exotic plant control programs. A prohibition against the use of exotic plant species with a California Invasive Plant Council (Cal-IPC; 2006) rating of High or Moderate will be implemented for all landscaping efforts.

To accommodate changing growth patterns, weeding will occur as needed at the discretion of the Resource Manager. Weeding will occur by manual or mechanical means; no weed whips or chemical herbicides may be used unless specifically determined to be necessary by the Resource Manager. The Resource Manager is responsible for removal of species rated as High by Cal-IPC within 2 weeks after discovery. Special attention will be paid to eradicating fennel, which can form dense local populations and drastically alter the composition and structure of many plant communities (Cal-IPC 2006). Non-native grasses will not be removed unless it is determined by the Resource Manager that they are significantly impacting a sensitive resource. General weeding events will occur twice annually: in January/February and April/May.

If the use of herbicide is deemed necessary, application should be minimal, and may only occur in compliance with all federal and state laws. Use of chemical herbicides should be determined in coordination with the County Department of Environmental Health. All herbicide use will be applied by backpack sprayers or stump painting directly on target weeds and will involve short duration, biodegradable chemicals.

Predator Control

Exotic predators, such as Argentine ants (*Linepithema humile*) have potential to occur within the BOS. The Argentine ant displaces native ants that comprise the principal food source for horned lizards. A moderate tolerance for pest species will be permitted, but if the Resource Manager determines that pest eradication measures (pesticide application) are required, the USFWS and/or CDFG will be contacted to determine the need and appropriate methods, including potentially hiring a licensed pest control advisor. Exotic species control/eradication programs should be implemented at the appropriate time of year depending on the pest species and field conditions, and should be coordinated with efforts on adjacent properties.

Fire and Flood Management

Fire is an important element in the ecology of southern California but can also present potential hazards to habitat within the BOS. Following fire events, vegetation within the BOS will be allowed to recover naturally; however, seeding may be required at the discretion of the Resource Manager.

The drainage within the BOS may flood during heavy rains. The Resource Manager will monitor habitat areas disturbed by flooding and implement remedial efforts as needed. Flood-damaged areas should be allowed to recover naturally; however, remedial measures, including erosion control or seeding may be required if natural recovery is inadequate or if unstable conditions (e.g., slope undercutting) are created.

Off-highway Vehicle Control

The Resource Manager will coordinate with the Border Patrol prior to installation of trail/dirt road fencing, barriers, and/or signage. Travel through the BOS by the Border Patrol or other OHVs will be eliminated with fencing to protect the BOS. A fence is proposed surrounding the majority of the BOS. An area along the eastern and southern portions of the BOS will remain unfenced to allow for connectivity to the adjacent project's proposed BOS and cross border drainage flows.

5.2 ADAPTIVE MANAGEMENT

The Resource Manager is responsible for interpreting the results of site monitoring to determine the ongoing success of the RMP. If it is necessary to modify the plan between regularly scheduled updates, plan changes shall be submitted to the County and agencies for approval as required.

5.3 OPERATIONS, MAINTENANCE, AND ADMINISTRATION TASKS

A list of tasks such as baseline inventory, vegetation mapping, species survey, species, management, etc. is included in Table 1.

5.3.1 Goals

Ongoing maintenance and administration, which will be the responsibility of the Resource Manager, will be conducted to ensure no loss of resource quality within the BOS.

5.3.2 Tasks

The general operations, maintenance, and administrative tasks to be conducted by the Resource Manager will include the following tasks.

Annual Monitoring Reports

A letter report will be submitted to the USFWS, CDFG, and County that will summarize the overall condition of vegetation communities and sensitive species in the BOS, propose management tasks for the following year, and discuss results of management activities proposed in the previous report. Submitted annually by the end of January, this letter report will compare the most recent data with those collected in previous years, evaluate sensitive species status and local wildlife corridor use, and outline appropriate remedial measures. Fees for County review will also be included with submittal of the annual report.

The results of all updated vegetation mapping (every fifth year), sensitive plant surveys (2 of every 5 years), and sensitive animal surveys (varies by species) should be included in the appropriate annual letter reports.

Management Plan Review

This RMP will be reviewed every 5 years to determine the need for revisions or updates. Due to changing conditions within the BOS, it may be necessary to revise the tasks outlined in this plan to ensure continued success of the stated goals.

Access Control

To prevent human-induced degradation of the BOS due to illegal occupancy, trespassing (OHV activity), removal of resources, or dumping of trash or debris, the Resource Manager will restrict access to the BOS. Permanent signage will be posted every 200 feet and at locations of unauthorized trails entering the BOS and be maintained by the Resource Manager. All signs will be corrosion-resistant (e.g., steel), measure at minimum 6 by 9 inches in size, be posted on a metal post at least 3 feet above ground level, and provide notice in both Spanish and English that the area is an ecological preserve with trespassing prohibited. The signs will state the following:

Sensitive Environmental Resources
Area Restricted by Easement
Entry without express written permission from the County of San Diego is prohibited.
To report a violation or for more information about easement restrictions and exceptions
contact the County of San Diego, Department of Planning and Land Use
Reference: TM5505

Fencing

The project applicant will install a fence along the drainage channel where it abuts development. The type of fencing will comply with the East Otay Mesa Specific Plan. No fencing will be installed along the eastern edge of the BOS where it connects with other preserved open space. The southern border of the BOS also will remain open to allow for cross border drainage flows. The fencing will be maintained by the Resource Manager.

Barriers

Along with signage installation, the Resource Manager will install barriers (e.g., K-rails) along the perimeter of the BOS at locations where trails and dirt roads enter and exit the BOS, as necessary. Barriers will reduce the amount of OHV activity in the BOS.

Additional fencing needs will be identified by the Resource Manager and a fencing plan will be submitted to the County for review prior to installation. Such fencing may be required for:

- Prevention of unauthorized vehicle access;
- Protection of open space boundaries (e.g., along utility easements);
- Prevention of trail formation within the preserve; and/or

Illegal Occupancy

Illegal occupancy is common in open space areas, although this is not anticipated to be an issue on this site because of the open nature of the habitat. The Resource Manager will survey the BOS for evidence of illegal access concurrently with other site management activities and file a report with the Sheriff and the County DPLU, if necessary.

Removal of Resources

Removal of any plants, animals, rocks, minerals, or other natural resources from the BOS is prohibited. The Resource Manager will maintain a log of illegal collecting and may report individuals caught removing natural resources from the BOS to the USFWS, CDFG, County, and/or Sheriff's Office. The Resource Manager may allow and supervise seed collection and plant cuttings as part of revegetation efforts within the preserve and/or in nearby areas. Any such collected plant materials should be limited to that necessary to ensure successful revegetation while not adversely affecting local plant populations.

Trash Removal and Vandalism Repair

The Resource Manager will also conduct general trash removal within the BOS during regular management site visits. Additionally, damage caused by vandalism will be repaired. Trash removal and vandalism repair will occur as needed during regular bimonthly site visits.

Hazardous Materials Monitoring

The release of hazardous materials such as fuels, oil, vegetation clippings, trash, and landscaping related chemicals (e.g., pesticides and herbicides) has potential to affect the BOS negatively. Although no specific survey will be conducted, if such hazardous materials are observed within the BOS during regular bimonthly site visits, remedial measures to remove the material will occur.

5.4 MANAGEMENT CONSTRAINTS

This RMP follows the regulatory and permitting requirements of the Corps, CDFG, and County. Although it anticipates measures for most foreseeable contingencies, several external constraints remain. For example, changes in rainfall patterns may affect the populations of sensitive plant and animal species within the BOS. Likewise, changes in other environmental factors such as air pollution, hazardous waste runoff, and erosion could have detrimental effects on the habitat within the BOS. Moreover, because the BOS is bordered by the development to the north, west, and northwest, these areas are susceptible to edge effects, including noise, dust, and dumping of trash.

5.5 PUBLIC USE TASKS

The BOS will not have public trails or other facilities. Existing trails will be blocked and/or demarcated with signage to prevent continued use and no additional trails will be installed. The BOS is intended to serve as a habitat preserve and as such is not compatible with many activities (See Table 1).

Activities that will be specifically prohibited include:

- Use of herbicides (except to remove non-native species as necessary), pesticides, biocides, fertilizers, or other agricultural chemicals;

- Use of OHVs and any other motorized vehicles except in the execution of management duties or through coordination with the Border Patrol;
- Grazing or other agricultural activity of any kind;
- Recreational activities including, but not limited to, horseback riding, biking, hunting, or fishing;
- Commercial or industrial uses;
- Construction, reconstruction or placement of any building or other improvement, billboard, or sign;
- Depositing or accumulation of soil, trash, ashes, refuse, waste, bio-solids or any other material;
- Planting, introduction or dispersal of non-native or exotic plant or animal species**;**
- Altering the general topography of the BOS, including but not limited to building of roads and flood control work;
- Removing, destroying, or cutting of trees, shrubs or other vegetation, except as required by federal, state or local law or by governmental order for (1) emergency fire breaks; (2) maintenance of existing foot trails or roads; (3) prevention or treatment of disease; or (4) required mitigation programs; and
- Manipulating, impounding or altering any natural watercourse, body of water or water circulation on the open space, and activities or uses detrimental to water quality, including but not limited to degradation or pollution of any surface or sub-surface waters.

5.6 FIRE MANAGEMENT TASKS

As previously stated, a 40-foot wide limited building zone occurs on the western and northeastern portions of the BOS (Figure 3) and is located entirely on the building pads. This zone precludes the building of habitable structures that would require fire clearing into the BOS.

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APPENDIX A

PLANT SPECIES OBSERVED

Appendix A
PLANT SPECIES OBSERVED – OTAY BUSINESS PARK

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT‡
ANGIOSPERMS – MONOCOTS			
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	NNG
Liliaceae	*Bloomeria crocea* var. *crocea*	golden star	NNG
	Chlorogalum parviflorum	small-flower soap-plant	NNG
	Dichelostemma capitatum	blue dicks	NNG
	Zigadenus fremontii	star-lily	NNG
Poaceae	*Achnatherum coronatum*	giant stipa	NNG
	Avena barbata	slender wild oat	NNG
	Bromus diandrus	common ripgut grass	NNG
	Bromus hordeaceus	soft chess	NNG
	Bromus madritensis ssp. *rubens*	foxtail chess	NNG
	Gastridium ventricosum	nit grass	NNG
	Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	NNG
	Lamarckia aurea	goldentop	NNG
	Leymus condensatus	giant wild rye	NNG
	Lolium multiflorum	Italian ryegrass	NNG
	Lolium perenne	English ryegrass	NNG
	Polypogon monspeliensis	rabbitfoot grass	NNG
	Schismus barbatus	Mediterranean grass	NNG, DH
ANGIOSPERMS – DICOTS			
Apiaceae	*Daucus pusillus*	rattlesnake weed	NNG
	Foeniculum vulgare	fennel	NNG
	Sanicula arguta	sharp-tooth sanicle	NNG
Asteraceae	*Achyrachaena mollis*	blow-wives	NNG
	Anthemis cotula	mayweed	NNG
	Artemisia californica	California sagebrush	NNG
	Baccharis sarothroides	broom baccharis	NNG
	Centaurea melitensis	star thistle	NNG
	Conyza canadensis	horseweed	NNG
	Cotula australis	Australian brass-buttons	NNG
	Cynara cardunculus	cardoon	NNG
	Deinandra fasciculata	fascicled tarplant	NNG
	Filago californica	California filago	NNG
	Filago gallica	narrow-leaf filago	NNG
	Gazania sp.	gazania	NNG
	Gnaphalium sp.	cudweed	NNG
	Grindelia camporum var. *bracteosum*	gum plant	NNG

Appendix A (cont.)
PLANT SPECIES OBSERVED – OTAY BUSINESS PARK

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT‡
ANGIOSPERMS – DICOTS (cont.)			
Asteraceae (cont.)	*Hedypnois cretica*	Crete hedypnois	NNG
	Helianthus annuus	western sunflower	NNG
	Hypochaeris glabra	smooth cat's-ear	NNG
	Lasthenia californica	goldfields	NNG
	Psilocarphus brevissimus var. *brevissimus*	dwarf woolly-heads	NNG
	Sonchus asper	prickly sow thistle	NNG
	Sonchus oleraceus	common sow thistle	NNG
Boraginaceae	*Amsinckia menziesii* var. *intermedia*	rancher's fiddleneck	NNG
	Plagiobothrys sp.	popcorn flower	NNG
Brassicaceae	*Brassica nigra*	black mustard	NNG
	Brassica rapa	field mustard	NNG
	Hirschfeldia incana	perennial mustard	NNG
Capparaceae	*Isomeris arborea*	bladderpod	NNG
Chenopodiaceae	*Atriplex semibaccata*	Australian saltbush	NNG
	Salsola tragus	Russian thistle	NNG, DH
Convolvulaceae	*Calystegia sumulans*	finger-leaf morning-glory	NNG
Cucurbitaceae	*Marah macrocarpus*	wild cucumber	NNG
Euphorbiaceae	*Chamaesyce polycarpa*	desert sand mat	NNG
Fabaceae	*Lotus scoparius*	deerweed	NNG
	Melilotus alba	white sweet clover	NNG
	Melilotus indica	Indian sweet clover	NNG
	Trifolium sp.	clover	NNG
Geraniaceae	*Erodium botrys*	long-beak filaree	NNG
	Erodium brachycarpum	short-beak filaree	NNG
	Erodium cicutarium	red-stem filaree	NNG, DH
Lamiaceae	*Marrubium vulgare*	horehound	NNG
Malvaceae	*Malva parviflora*	cheeseweed	NNG
	Sidalcea malviflora ssp. *sparsifolia*	checker-bloom	NNG
Nyctaginaceae	*Mirabilis californica*	wishbone bush	NNG
Plantaginaceae	*Plantago erecta*	dwarf plantain	NNG
Polygonaceae	*Eriogonum fasciculatum*	California buckwheat	NNG
Primulaceae	*Anagallis arvensis*	scarlet pimpernel	NNG
	Dodecatheon clevelandii	shooting stars	NNG

‡Habitat acronyms: DH=disturbed habitat, NNG=non-native grassland,

APPENDIX B

SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

Appendix B
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR –
OTAY BUSINESS PARK

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
San Diego thorn-mint (*Acanthomintha ilicifolia*)	FT/SE CNPS List 1B.1 County Group A	Low. Occurs on friable clay soils, often in open areas within grasslands. Although suitable habitat occurs on site, would likely have been observed during vernal pool surveys if present.
Shaw's agave (*Agave shawii*)	--/-- CNPS List 2.1 County Group B	Low. Occurs in coastal sage scrub and coastal bluff scrub. Suitable habitat does not occur on site.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CNPS List 1B.1 County Group A	Low. Generally found along creeks or seasonal drainages along the periphery of willow riparian areas. Habitat on site is only marginally suitable.
Golden-spined cereus (*Bergerocactus emoryi*)	--/-- CNPS List 2.2 County Group B	Very low. Generally found in maritime succulent scrub, which does not occur on site.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- CNPS List 1B.1 County Group A	Low. Occurs in vernal pool communities and ephemeral streams and seeps in Riverside and San Bernardino counties south to Baja. Would have been observed during vernal pool surveys if present.
Dunn's mariposa lily (*Calochortus dunnii*)	--/SR CNPS List 1B.2 County Group A	Low. Typically occurs in chaparral growing on metavolcanic or gabbro soils. The site is below elevation range of this species and lacks appropriate habitat.
Wart-stemmed ceanothus (*Ceanothus verrucosus*)	--/-- CNPS List 2.2 County Group B	Very low. Occurs in coastal and maritime chaparral communities. Suitable conditions do not occur on site.
Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	--/-- CNPS List 1B.2 County Group A	None. A conspicuous shrub occurring in chaparral, which does not occur on site. Would have been observed if present.
Orcutt's bird's-beak (*Cordylanthus orcuttianus*)	--/-- CNPS List 2.1 MSCP Covered County Group B	Low. Annual species occurring in seasonal drainages and scrub communities adjacent to riparian areas. Suitable habitat does not occur on site.
Tecate cypress (*Cupressus forbesii*)	--/-- CNPS List 1B.1 County Group A	None. Evergreen tree occurring in southern mixed chaparral and cypress forest. Suitable habitat does not occur on site. Would have been observed if present.
Otay tarplant (*Deinandra conjugens*)	FT/SE CNPS List 1B.1 County Group A	Low. Occurs on friable clay soils in grasslands or very open coastal sage scrub. Although grasslands and clay soils occur on site, this species was not detected during rare plant surveys.

Appendix B (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR –
OTAY BUSINESS PARK

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
Western dichondra (*Dichondra occidentalis*)	--/-- CNPS List 4.2 County Group D	Very low. Found in chaparral, coastal sage scrub, and among rocky outcrops in grasslands. Suitable habitat does not occur on site,
Orcutt's dudleya (*Dudleya attenuata* ssp. *orcuttii*)	--/-- CNPS List 2.1 County Group B	Low. Found in coastal sage scrub openings, typically in coastal situations. Suitable habitat does not occur on site.
Palmer's goldenbush (*Ericameria palmeri* ssp. *palmeri*)	--/-- CNPS List 2.2 County Group B	Very low. Typically occurs in chaparral and along coastal drainages. A large shrub that would likely have been detected if present on site.
Palmer's grapplinghook (*Harpagonella palmeri*)	--/-- CNPS List 4.2 County Group B	Low to moderate. Occurs on grassy slopes and open coastal sage scrub with clay soil. Would have been observed if present.
Graceful tarplant (*Holocarpha virgata* ssp. *elongata*)	--/-- CNPS List 4.2 County Group D	Moderate. Generally found in grasslands and very open scrublands. Reported to occur in scattered locations in O'Neal Canyon to the east. Potentially suitable habitat occurs on site.
Heart-leaved pitcher sage (*Lepechinia cardiophylla*)	--/-- CNPS List 1B.2 County Group A	Low. Occurs in thick chaparral and known in California from only 10 sites. Would have been observed if present.
Gander's pitcher sage (*Lepechinia ganderi*)	--/-- CNPS List 1B.3 MSCP NE County Group A	Low. Occurs on metavolcanic soils in chaparral. Suitable conditions do not occur on site.
Willowy monardella (*Monardella linoides* ssp. *viminea*)	FE/SE CNPS 1B.1 County Group A	Very low. Typically occurs in riparian scrub, and sometimes chaparral or coastal sage scrub associated with drainages. Would likely have been observed if present.
San Diego goldenstar (*Muilla clevelandii*)	--/-- CNPS List 1B.1 County Group A	Moderate. Generally grows on clay soils in grasslands, often in association with mima mounds and vernal pools. Marginally suitable habitat occurs on site. Reported to the east of the project site.
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- CNPS List 3.1 County Group A	Low. Occurs in vernal pool communities, typically in deeper areas. Although vernal pools occur on site, their disturbed state provides little suitable habitat for this species.
Spreading navarretia (*Navarretia fossalis*)	FT/-- CNPS List 1B.1 County Group A	Low. Occurs most often in deeper vernal pools. Although vernal pools occur on site, this species was not detected during any surveys; however the likelihood of detection varies from year to year.

Appendix B (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – OTAY BUSINESS PARK

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
Dehesa bear grass (*Nolina interrata*)	--/SE CNPS List 1B.1 County Group A	Low. Occurs in mafic chaparral such, often with gabbroic soils. Suitable habitat does not occur on site.
Snake cholla (*Opuntia californica* var. *californica*)	--/-- CNPS List 1B.1 County Group A	Low. Chaparral and coastal sage scrub from Point Loma south to Chula Vista and Baja. Although historically reported on Otay Mesa, not known from the project vicinity.
California Orcutt grass (*Orcuttia californica*)	FE/SE CNPS List 1B.1 County Group A	Low. Occurs in vernal pool communities. Would likely have been observed during vernal pool or rare plant surveys if present.
Short-lobed broomrape (*Orobanche parishii* ssp. *brachyloba*)	--/-- CNPS List 4.2 County Group A	None. Occurs on sandy substrates in coastal bluff scrub and coastal dunes. Appropriate habitat does not occur on site.
Otay Mesa mint (*Pogogyne nudiuscula*)	FE/SE CNPS List 1B.1 County Group A	Low. Occurs in Otay Mesa vernal pool communities. Would likely have been observed during vernal pool or rare plant surveys if present.
Nuttall's scrub oak (*Quercus dumosa*)	--/-- CNPS List 1B.1 County Group A	Low. A conspicuous shrub occurring in chaparral and coastal sage scrub. Suitable habitat does not occur on site. Would have been observed if present.
Munz's sage (*Salvia munzii*)	--/-- CNPS List 2.2 County Group B	Moderate. A shrub that occurs in coastal sage scrub and chaparral below 1,500 feet. Suitable shrub habitat does not occur on site.
Parry's tetracoccus (*Tetracoccus dioicus*)	--/-- CNPS List 1B.2 County Group A	Very low. Occurs in low, moderately dense chamise chaparral. Suitable habitat does not occur on site.

*Refer to Appendix E for a listing and explanation of status and sensitivity codes

APPENDIX C

ANIMAL SPECIES OBSERVED OR DETECTED

Appendix C
ANIMAL SPECIES OBSERVED OR DETECTED
OTAY BUSINESS PARK

SCIENTIFIC NAME	COMMON NAME
INVERTEBRATES	
Apodemia vergulti	Behr's metalmark
Coenonympha californica	common California ringlet
Erynnis funeralis	funereal duskywing
Papilio zelicaon	Anise swallowtail
*Pieris rapae**	cabbage white butterfly
Pyrgus albescens	western checkered skipper
Vanessa cardui	painted lady
Vannessa annabella	west coast lady
VERTEBRATES	
Reptiles	
Sceloporus occidentalis	western fence lizard
Uta stansburiana	common side-blotched lizard
Birds	
Agelaius phoeniceus	red-winged black bird
Calypte anna	Anna's hummingbird
Carpodacus mexicanus	house finch
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Lanius ludovicianus†	loggerhead shrike
Sayornis nigricans	black phoebe
Sturnella neglecta	western meadowlark
Zenaida macroura	mourning dove
Mammals	
Canis latrans	coyote
Spermophilus beecheyi	California ground squirrel
Sylvilagus bachmani	brush rabbit

*Non-native species
†Sensitive species

APPENDIX D

SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

Appendix D SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – OTAY BUSINESS PARK		
SPECIES	**LISTING OR SENSITIVITY***	**POTENTIAL TO OCCUR**
INVERTEBRATES		
Harbison's dun skipper (*Euphyes vestris harbisoni*)	--/-- County Group 1	Low. Host plant San Diego sedge (*Carex spissa*) not observed on site.
Hermes copper (*Lycaena hermes*)	--/-- County Group 1	Low. Host plant spiny redberry (*Rhamnus crocea*) not observed on site.
Thorne's hairstreak (*Mitoura thornei*)	--/-- County Group 1	Low. Closely associated with food plant Tecate cypress (*Cupressus forbesii*) and closed cone forest habitats. Appropriate habitat does not occur on or near the site.
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE/-- County Group 1 County MSCP Rare, NE	Low. No Quino checkerspot butterflies were detected on site during 2001 or 2006 protocol surveys conducted by EDAW; however, 1 individual was detected on the central hill in the southern portion of the property by URS (2005).
VERTEBRATES		
Amphibians and Reptiles		
Arroyo toad (*Anaxyrus californicus*)	FE/SSC County Group 1	None. Found in washes, streams, and arroyos in semiarid areas. Prefer shallow pools and open, sandy stream terraces or sand bars with cottonwoods, willows, or sycamores. Suitable habitat does not occur on site.
Silvery legless lizard (*Anniella pulchra pulchra*)	--/SSC County Group 2	Low. Burrows in loose soils, sandy washes, or leaf litter. Occurs in moist habitats of chaparral, pine, and oak woodlands, and riparian streamside growth. Appropriate habitat limited on site.
Orange-throated whiptail (*Aspidoscelis hyperythra*)	--/SSC County Group 2	Low to moderate. Prefers scrub habitats with patches of brush and rocks for cover. Project site is dominated by grasslands and suitable shrub cover is not present.
Coastal rosy boa (*Charina trivirgata*)	--/-- County Group 1	Low. Generally occurs in coastal sage scrub, particularly where rock outcrops are common. Suitable scrub habitat does not occur on site.
Northern red-diamond rattlesnake (*Crotalus ruber ruber*)	--/SSC County Group 2	Low. Occurs in coastal sage scrub and chaparral with abundant rocky outcrops. Suitable conditions do not occur on site.

Appendix D (cont.) **SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – OTAY BUSINESS PARK**		
SPECIES	**LISTING OR SENSITIVITY***	**POTENTIAL TO OCCUR**
VERTEBRATES (cont.)		
Amphibians and Reptiles (cont.)		
Coronado skink (*Eumeces skiltonianus interparietalis*)	--/SSC County Group 2	Low to moderate. Occurs in grassland, scrublands, and cismontane woodlands with abundant leaf litter. Marginally suitable habitat occurs on site.
Coast horned lizard (*Phrynosoma coronatum*)	--/SSC County Group 2	Low to moderate. Prefers friable, rocky, or shallow soils in coastal sage scrub or chaparral. Require the presence of primary food source, harvester ants (*Pogonomyrmex* sp.). Suitable scrub habitat does not occur on site.
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)	--/SSC County Group 2	Low. Found in coastal sage scrub, chaparral, riparian, grasslands, and agricultural fields (Zeiner et al. 1988). Prefers open habitats with friable or sandy soils, burrowing rodents for food, and enough cover to escape being preyed upon. Shrub cover on site likely too sparse to support this species.
Two-striped gartersnake (*Thamnophis hammondii*)	--/SSC County Group 1	Moderate. Occurs along permanent and intermittent streams bordered by dense riparian vegetation, but occasionally associated with vernal pools or stock ponds. Observed just off site to the north prior to development.
Birds		
Cooper's hawk (*Accipiter cooperii*)	--/WL County Group 1	Low to moderate. Tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrublands or fields. Although no suitable nesting habitat occurs on site, foraging habitat is abundant.
Tricolored blackbird (*Agelaius tricolor*)	BCC/SSC County Group 1	Low. Occurs mostly in coastal lowland grasslands and wetlands. Would have been observed if present.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	--/WL County Group 1	Low. Occurs in coastal sage scrub on rocky hillsides and in canyons; also found in open sage scrub/grassy areas of successional growth. Suitable scrub habitat does not occur on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – OTAY BUSINESS PARK

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds (cont.)		
Grasshopper sparrow (*Ammodramus savannarum*)	--/SSC County Group 1	Moderate. Prefers grassland. Species observed on site prior to development.
Bell's sage sparrow (*Amphispiza belli belli*)	BCC/SSC County Group 1	Very low. Occurs in sunny, dry stands of coastal sage scrub or chaparral. Suitable scrub habitat does not occur on site.
Burrowing owl (*Athene cunicularia*)	BCC/SSC MSCP Rare, NE County Group 1	High. Occurs in grassland or open scrub habitats. Species observed on site prior to development and immediately off site.
Golden eagle (*Aquila chrysaetos*)	BCC, BGEPA/WL, Fully Protected; County Group 1 County MSCP Rare, NE	Moderate. Nesting occurs on cliff ledges or in trees on steep slopes, with foraging occurring primarily in grassland and sage scrub. Not usually observed near development. Observed flying over site during a survey for State Route 11 (URS 2005).
Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	BCC/SSC County Group 1	Very low. Occurs in coastal sage scrub with large cacti for nesting. No suitable habitat occurs on site.
Northern harrier (*Circus cyaneus*)	--/SSC County MSCP Covered County Group 1	Moderate. Open grassland and marsh. Species observed on site prior to development and immediately off site.
White-tailed kite (*Elanus leucurus*)	--/Fully Protected County Group 1	Moderate. Riparian woodlands and oak or sycamore groves adjacent to grassland. Species observed on site prior to development and immediately off site.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/SE County Group 1	None. Breeds within thickets of willows or other riparian understory usually along streams, ponds, lakes, or canyons. Migrants may be found among other shrubs in wetter areas. Suitable habitat does not occur on site.

Appendix D (cont.) **SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – OTAY BUSINESS PARK**		
SPECIES	**LISTING OR SENSITIVITY***	**POTENTIAL TO OCCUR**
VERTEBRATES (cont.)		
Birds (cont.)		
California horned lark (*Eremophila alpestris actia*)	--/WL County Group 2	Moderate. Coastal strand, arid grasslands, and sandy desert floors. Species observed on site prior to development and immediately off site.
Prairie falcon (*Falco mexicanus*)	BCC/WL County Group 1	Low to moderate. Nests on cliffs or bluffs and forage over open desert scrub or grassland. Although potential foraging habitat occurs on site, it is largely disturbed and urbanized.
American Peregrine falcon (*Falco peregrinus anatum*)	Delisted; BCC/SE, Fully Protected County Group 1	Low. Rare fall and winter visitor. Prefers various coastal habitats for foraging and breeding.
Long-billed curlew (*Numenius americanus*)	BCC/WL County Group 2	Very low. Occurs on tidal mudflats and open coastal grassland. Grasslands on site are largely unsuitable.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT/SSC County Group 1	Very low. Generally occurs in coastal sage scrub and very open chaparral. No suitable scrub habitat occurs on site.
Least Bell's vireo (*Vireo bellii pusillus*)	FE; BCC/SE County Group 1	None. Prefers riparian woodland forest and is most frequent in dense, young willows, or mule fat understory areas with a canopy of tall willows. Currently restricted to major river systems in San Diego County. Suitable habitat does not occur on site.
Mammals		
Pallid bat (*Antrozous pallidus*)	--/SSC County Group 2	Low. Roosts in caves, mines, bridges, crevices, and abandoned buildings and trees. Appropriate roosting habitat absent. Could forage throughout the site, but few potential roosting sites exist.
Dulzura pocket mouse (*Chaetodipus californicus femoralis*)	--/SSC County Group 2	Very low. Occurs in coastal sage scrub, chaparral, grasslands, and woodland habitats up to 7,900 feet. Suitable habitat does not occur on site.
San Diego pocket mouse (*Chaetodipus fallax fallax*)	--/SSC County Group 2	Low. Found in open areas of coastal sage scrub and weedy growth, often on sandy substrates. Although weedy grassland is abundant, suitable scrub cover is absent.

Appendix D (cont.) **SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – OTAY BUSINESS PARK**		
SPECIES	**LISTING OR SENSITIVITY***	**POTENTIAL TO OCCUR**
VERTEBRATES (cont.)		
Mammals (cont.)		
Spotted bat (*Euderma maculatum*)	--/SSC County Group 2	Very low. Roost in cliff cracks and outcrops; forage over open marshlands. No suitable roosting or foraging habitat occurs on site.
Western mastiff bat (*Eumops perotis californicus*)	--/SSC County Group 2	Very low. Roosts in crevices in cliff faces, and presence strongly tied to large (100 feet long or more) ponds for drinking. No suitable foraging or roosting habitat occurs on site.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	--/SSC County Group 2	Low to moderate. Occurs primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present. Grassland is abundant on site, but shrubs are scarce.
Yuma myotis (*Myotis yumanensis*)	--/-- County Group 2	Very low. Occurs in arid areas where it roosts in buildings, mines, caves, and crevices, and forages over permanent water sources. No suitable roosting or foraging habitat occurs on site.
San Diego desert woodrat (*Neotoma lepida intermedia*)	--/SSC County Group 2	Very low. Occurs in open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca. No suitable shrub cover occurs on site.
Southern grasshopper mouse (*Onychomys torridus ramona*)	--/SSC County Group 2	Very low. Generally found in desert habitats with loose, friable soils. Less common in coastal scrub and chaparral. Suitable shrub cover does not occur on site.
Pacific pocket mouse (*Perognathus longimembris pacificus*)	FE/SSC County Group 1	Low. Found in coastal sage scrub, but more often in sandy washes. Known currently from one location in Orange County and one on Camp Pendleton. Site outside of species' known range.
Townsend's big-eared bat (*Corynorhinus townsendii*)	--/SSC County Group 2	Very low. Typically roosts in caves and mines and forages for moths in forested areas. No suitable roosting or foraging habitat occurs on site.

*Refer to Appendix E for a listing and explanation.n of status and sensitivity codes

APPENDIX E

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

Appendix E
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

U.S. Fish and Wildlife Service (USFWS)

FE	Federally listed endangered
FT	Federally listed threatened
BGEPA	Bald and Golden Eagle Protection Act (discussed in more detail below)

California Department of Fish and Game (CDFG)

SE	State listed endangered
SR	State listed rare
ST	State listed threatened
CSC	California species of special concern
Fully Protected	Fully Protected species refer to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFG.

County of San Diego

Plant sensitivity:

Group A	Plants rare, threatened, or endangered in California or elsewhere
Group B	Plants rare, threatened, or endangered in California but more common elsewhere
Group C	Plants that may be quite rare, but more information is needed to determine rarity status
Group D	Plants of limited distribution and are uncommon, but not presently rare or endangered

Animal sensitivity:

County Sensitive	Animals considered under California Environmental Quality Act (CEQA) review of projects.

USFWS Bald and Golden Eagle Protection Act (BGEPA)

In 1782, Continental Congress adopted the bald eagle as a national symbol. During the next one and a half centuries, the bald eagle was heavily hunted by sportsmen, taxidermists, fisherman, and farmers. To prevent the species from becoming extinct, Congress passed the Bald Eagle Protection Act in 1940. The Act was extremely comprehensive, prohibiting the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald eagle "at any time or in any manner."

In 1962, Congress amended the Eagle Act to cover golden eagles, a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. The golden eagle, however, is accorded somewhat lighter protection under the Act than the bald eagle. Another 1962 amendment authorizes the Secretary of the Interior to grant permits to Native Americans for traditional religious use of eagles and eagle parts and feathers.

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

California Native Plant Society (CNPS) Codes

Lists

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

.2 – Fairly endangered in California (20 to 80 percent occurrences threatened)

.3 – Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)

A "CA Endemic" entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.